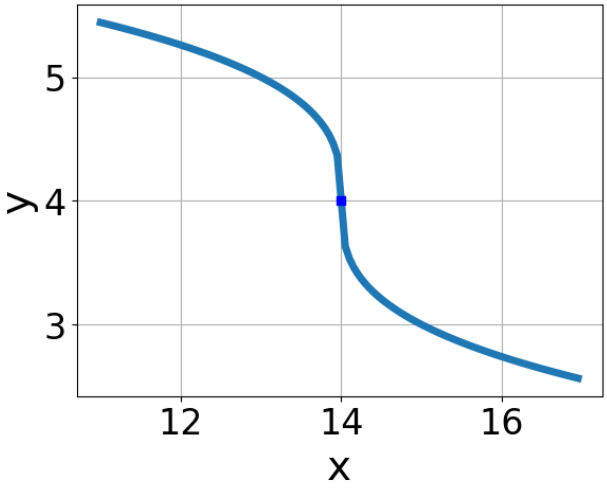
1. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt{x+14}+4$

B. $f(x) = \sqrt{x+14}+4$

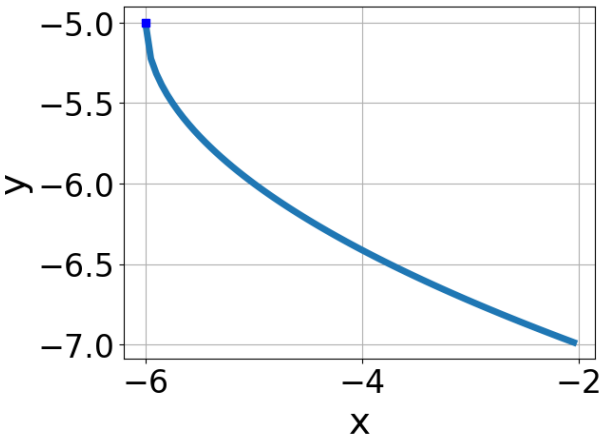
C. $f(x) = -\sqrt{x-14}+4$

D. $f(x) = \sqrt{x-14}+4$

E. None of the above

---

2. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt{x+6}-5$

B. $f(x) = -\sqrt{x-6}-5$

C. $f(x) = \sqrt{x+6} - 5$

D. $f(x) = \sqrt{x-6} - 5$

E. None of the above

---

3. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{21x^2 + 36} - \sqrt{-55x} = 0$$

A. $x_1 \in [1.26, 1.43]$ and $x_2 \in [-0.67, 6.33]$

B. All solutions lead to invalid or complex values in the equation.

C. $x \in [-1.35, -1.29]$

D. $x \in [-1.29, -1.27]$

E. $x_1 \in [-1.35, -1.29]$ and $x_2 \in [-4.29, -0.29]$

---

4. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-3x + 2} - \sqrt{9x - 8} = 0$$

A. $x_1 \in [0.6, 0.71]$ and $x_2 \in [0.81, 0.86]$

B. $x_1 \in [0.6, 0.71]$ and $x_2 \in [0.86, 0.95]$

C. $x \in [0.7, 0.94]$

D. $x \in [-0.52, -0.37]$

E. All solutions lead to invalid or complex values in the equation.

---

5. What is the domain of the function below?

$$f(x) = \sqrt[7]{-9x - 8}$$

A. The domain is $(-\infty, a]$, where $a \in [-1.58, -0.89]$

B. The domain is $[a, \infty)$, where $a \in [-1.41, -0.9]$

C. The domain is $[a, \infty)$, where $a \in [-1.07, -0.53]$

D. $(-\infty, \infty)$

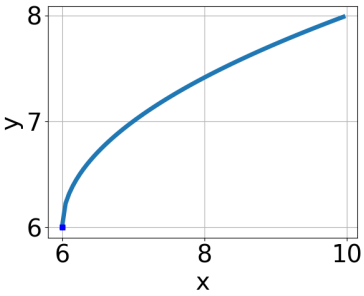
E. The domain is $(-\infty, a]$, where $a \in [-1.12, -0.1]$

---

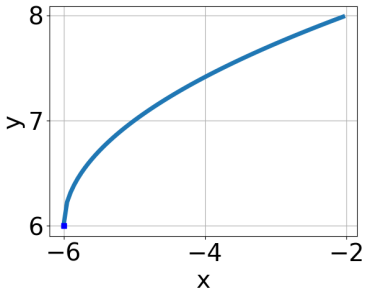
6. Choose the graph of the equation below.

$$f(x) = \sqrt{x - 6} + 6$$

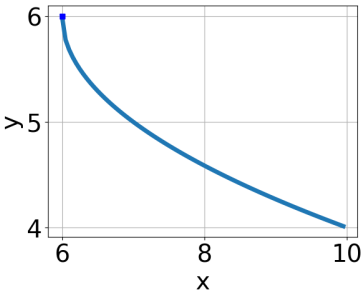
A.



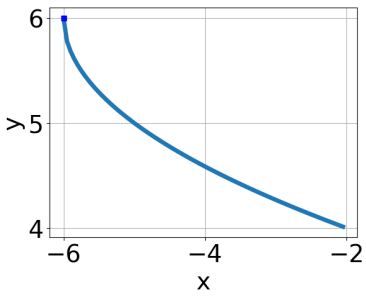
C.



B.



D.



E. None of the above.

---

7. What is the domain of the function below?

$$f(x) = \sqrt[7]{8x - 9}$$

A. $(-\infty, \infty)$

B. The domain is $(-\infty, a]$, where $a \in [1.03, 2.09]$

C. The domain is $(-\infty, a]$, where $a \in [0.88, 0.92]$

D. The domain is $[a, \infty)$, where $a \in [0.86, 1.12]$

E. The domain is $[a, \infty)$, where $a \in [1.11, 1.38]$

---

8. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{18x^2 + 40} - \sqrt{-61x} = 0$$

A. $x_1 \in [-3.63, -1.99]$ and $x_2 \in [-3.89, 0.11]$

B. $x \in [-1.96, -0.45]$

C. $x_1 \in [-0.22, 1.61]$ and $x_2 \in [2.5, 3.5]$

D. All solutions lead to invalid or complex values in the equation.

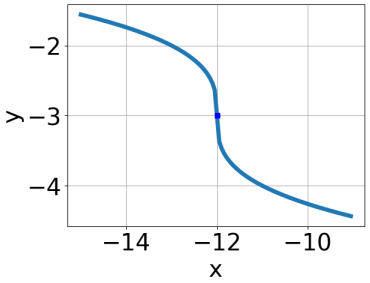
E. $x \in [-3.63, -1.99]$

---

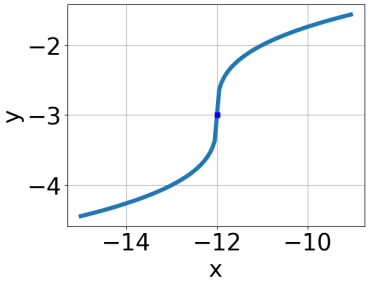
9. Choose the graph of the equation below.

$$f(x) = \sqrt[3]{x + 12} - 3$$

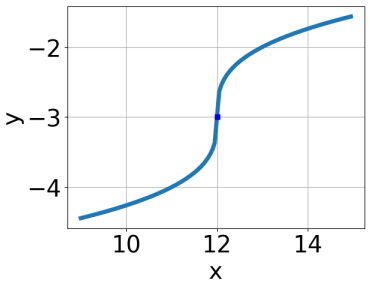
A.



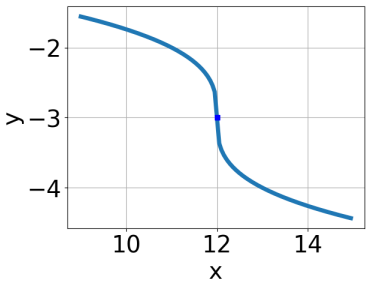
C.



B.



D.



E. None of the above.

---

10. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{7x+5} - \sqrt{-3x-9} = 0$$

A. $x_1 \in [-3.4, -2.8]$ and $x_2 \in [-2.71, 4.29]$

B. $x_1 \in [-1.6, -0.3]$ and $x_2 \in [-2.71, 4.29]$

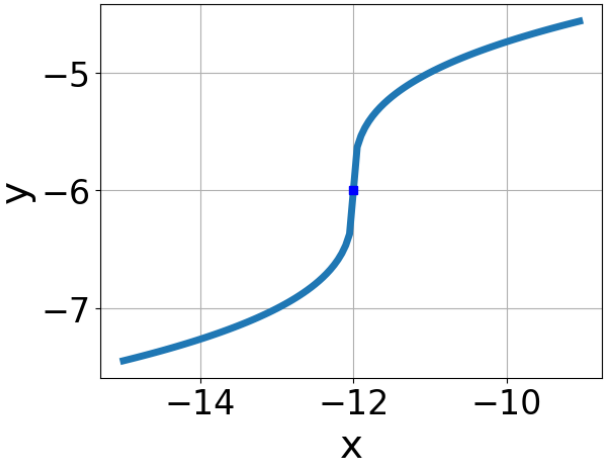
C. $x \in [-1.6, -0.3]$

D. All solutions lead to invalid or complex values in the equation.

E. $x \in [-1.1, 0.5]$

---

11. Choose the equation of the function graphed below.



A. $f(x) = \sqrt{x+12} - 6$

B. $f(x) = \sqrt{x-12} - 6$

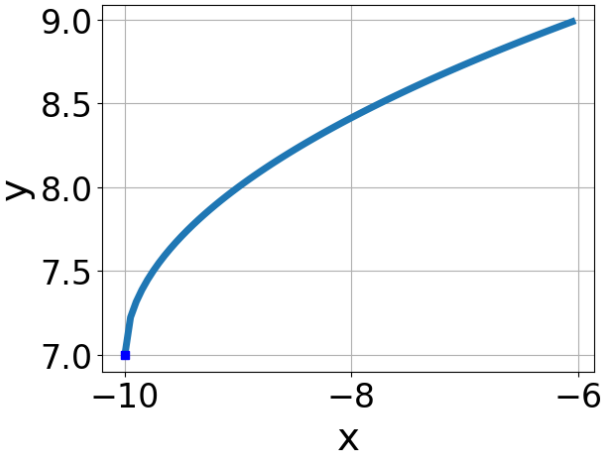
C. $f(x) = -\sqrt{x-12} - 6$

D. $f(x) = -\sqrt{x+12} - 6$

E. None of the above

---

12. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt{x-10}+7$

B. $f(x) = \sqrt{x-10}+7$

C. $f(x) = \sqrt{x+10}+7$

D. $f(x) = -\sqrt{x+10}+7$

E. None of the above

---

13. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{14x^2-12}-\sqrt{-13x}=0$$

A. $x \in [-2.71, -0.05]$

B. $x \in [-0.03, 1.04]$

C. $x_1 \in [-0.03, 1.04]$ and $x_2 \in [1.18, 2.2]$

D. All solutions lead to invalid or complex values in the equation.

E. $x_1 \in [-2.71, -0.05]$ and $x_2 \in [-0.34, 0.79]$

---

14. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{5x-8}-\sqrt{8x-5}=0$$

A. $x \in [-3, 0]$

B. All solutions lead to invalid or complex values in the equation.

C. $x_1 \in [-0.38, 5.62]$ and $x_2 \in [0.6, 3.6]$

D. $x \in [-7.33, -1.33]$

E. $x_1 \in [-3, 0]$ and $x_2 \in [0.6, 3.6]$

---

15. What is the domain of the function below?

$$f(x) = \sqrt[4]{-5x + 8}$$

A. $(-\infty, \infty)$

B. $[a, \infty)$, where $a \in [1.46, 1.79]$

C. $[a, \infty)$, where $a \in [0.35, 1.05]$

D. $(-\infty, a]$, where $a \in [0.2, 0.8]$

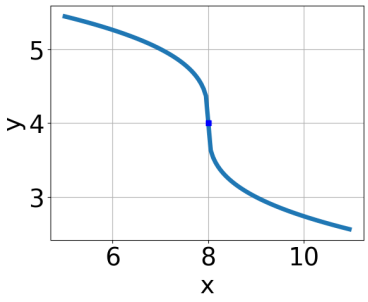
E. $(-\infty, a]$, where $a \in [1.2, 3]$

---

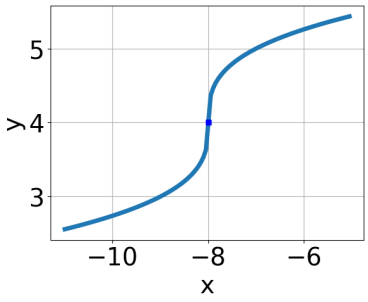
16. Choose the graph of the equation below.

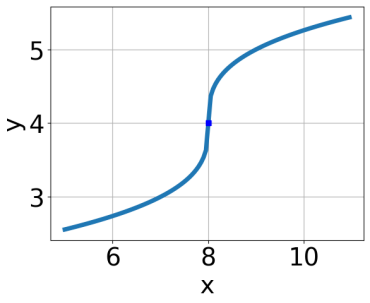
$$f(x) = -\sqrt[3]{x - 8} + 4$$

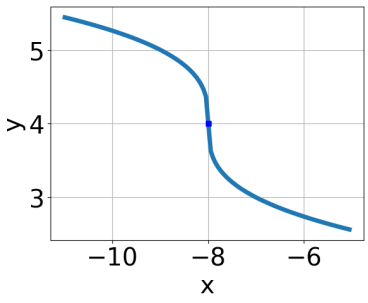
A.



B.



C. 

D. 

E. None of the above.

---

17. What is the domain of the function below?

$$f(x) = \sqrt[7]{8x - 9}$$

A. $(-\infty, \infty)$

B. The domain is $[a, \infty)$, where $a \in [0.92, 1.31]$

C. The domain is $(-\infty, a]$, where $a \in [0.71, 1.01]$

D. The domain is $(-\infty, a]$, where $a \in [1.03, 1.25]$

E. The domain is $[a, \infty)$, where $a \in [0.86, 0.94]$

---

18. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{9x^2 + 6} - \sqrt{15x} = 0$$

A. $x \in [0.2, 0.91]$

B. $x_1 \in [0.2, 0.91]$ and $x_2 \in [0.3, 4.3]$

C. $x \in [0.98, 1.04]$

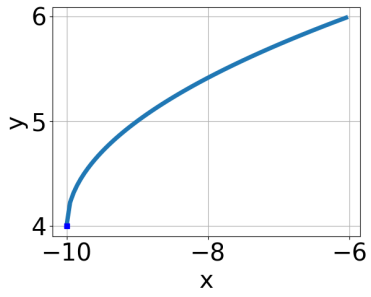
D. $x_1 \in [-1.07, -0.43]$ and $x_2 \in [-2.5, 0.1]$

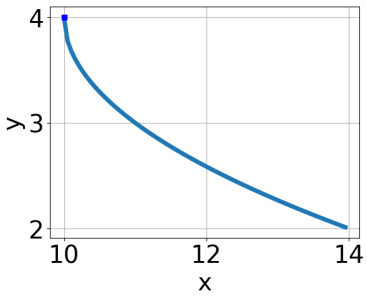
E. All solutions lead to invalid or complex values in the equation.

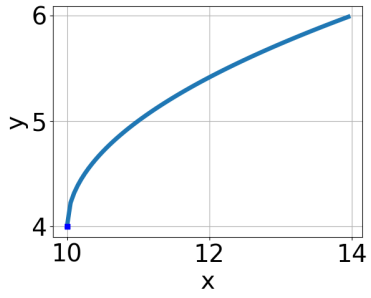
---

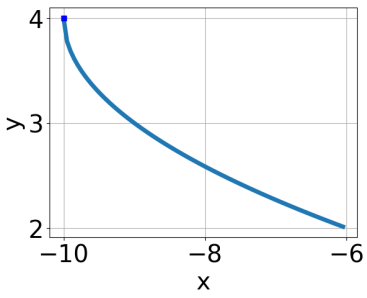
19. Choose the graph of the equation below.

$$f(x) = \sqrt{x - 10} + 4$$

A.


C.


B.


D.


E. None of the above.

---

20. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{8x+8} - \sqrt{-2x+7} = 0$$

A. $x \in [-2.14, -1.24]$

B. $x \in [-0.76, 0]$

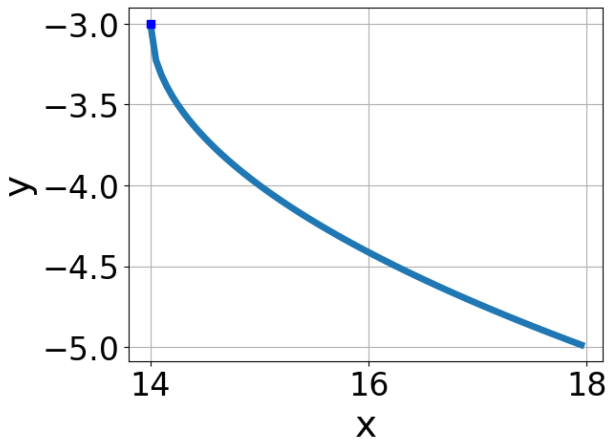
C. $x_1 \in [-1.48, -0.65]$ and $x_2 \in [1.5, 6.5]$

D. All solutions lead to invalid or complex values in the equation.

E. $x_1 \in [-1.48, -0.65]$ and $x_2 \in [-0.1, 1.9]$

---

21. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt[3]{x+14} - 3$

B. $f(x) = \sqrt[3]{x-14} - 3$

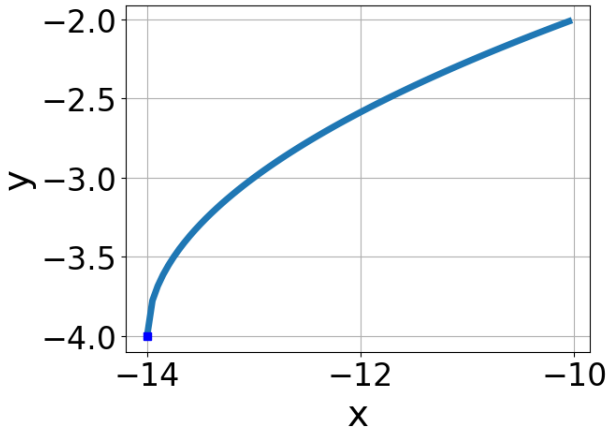
C. $f(x) = -\sqrt[3]{x-14} - 3$

D. $f(x) = \sqrt[3]{x+14} - 3$

E. None of the above

---

22. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt[3]{x+14} - 4$

B. $f(x) = -\sqrt[3]{x-14} - 4$

C. $f(x) = \sqrt[3]{x+14} - 4$

D. $f(x) = \sqrt[3]{x-14} - 4$

E. None of the above

---

23. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-15x^2+63}-\sqrt{24x}=0$$

A. $x_1 \in [1.4, 4.4]$ and $x_2 \in [1.6, 3.4]$

B. $x \in [-3, 0]$

C. $x_1 \in [-3, 0]$ and $x_2 \in [-0.5, 2.2]$

D. All solutions lead to invalid or complex values in the equation.

E. $x \in [1.4, 4.4]$

---

24. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-5x+2}-\sqrt{8x+8}=0$$

A. $x_1 \in [-0.55, -0.31]$ and $x_2 \in [0.4, 7.4]$

B. $x \in [0, 1.15]$

C. All solutions lead to invalid or complex values in the equation.

D. $x_1 \in [-1.33, -0.99]$ and $x_2 \in [0.4, 7.4]$

E. $x \in [-0.55, -0.31]$

---

25. What is the domain of the function below?

$$f(x)=\sqrt[5]{-6x+7}$$

A. $(-\infty, \infty)$

B. The domain is $(-\infty, a]$, where $a \in [1.02, 1.48]$

C. The domain is $(-\infty, a]$, where $a \in [0.74, 0.96]$

D. The domain is $[a, \infty)$, where $a \in [0.21, 1.13]$

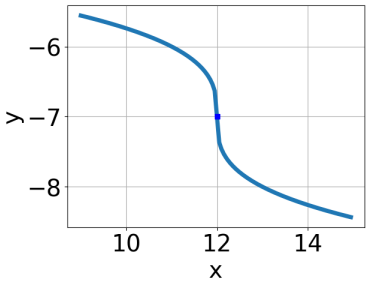
E. The domain is $[a, \infty)$, where $a \in [1.03, 1.43]$

---

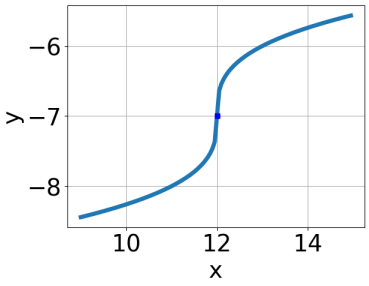
26. Choose the graph of the equation below.

$$f(x) = \sqrt[3]{x + 12} - 7$$

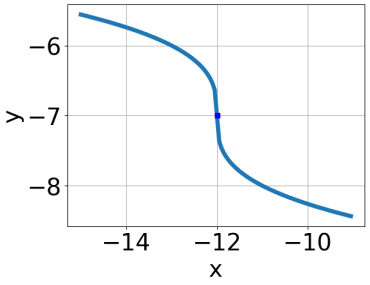
A.



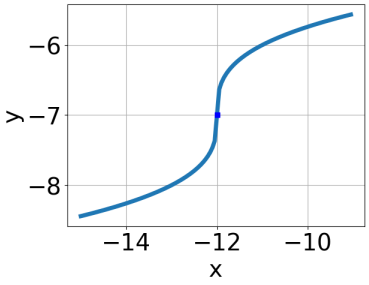
C.



B.



D.



E. None of the above.

---

27. What is the domain of the function below?

$$f(x) = \sqrt[7]{-9x + 3}$$

A. The domain is $[a, \infty)$, where $a \in [2, 5]$

B. The domain is $(-\infty, a]$, where $a \in [0.3, 1.1]$

C. The domain is $(-\infty, a]$, where $a \in [2.8, 4.1]$

D. The domain is $[a, \infty)$, where $a \in [-5.67, 2.33]$

E. $(-\infty, \infty)$

---

28. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-36x^2 - 10} - \sqrt{-42x} = 0$$

A. $x_1 \in [0.15, 0.65]$ and $x_2 \in [0.6, 1.6]$

B. $x \in [0.7, 0.85]$

C. $x \in [0.15, 0.65]$

D. All solutions lead to invalid or complex values in the equation.

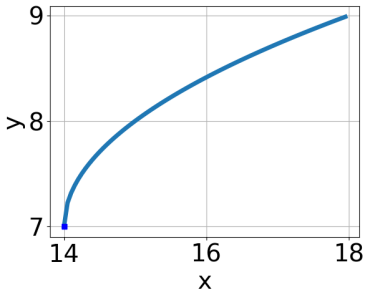
E. $x_1 \in [-0.47, -0.2]$ and $x_2 \in [-2.6, -0.7]$

---

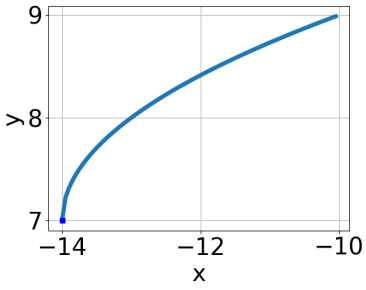
29. Choose the graph of the equation below.

$$f(x) = \sqrt{x - 14} + 7$$

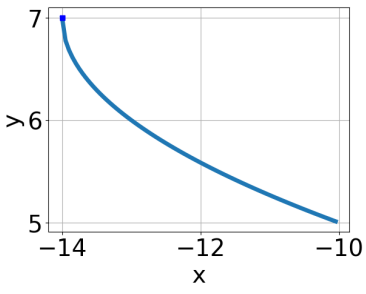
A.



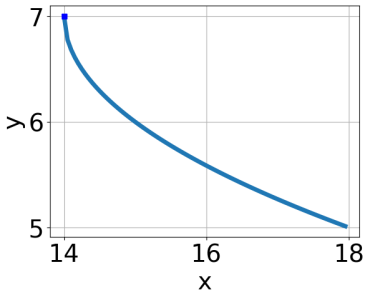
C.



B.



D.



E. None of the above.

---

30. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{9x - 9} - \sqrt{-5x - 3} = 0$$

A. $x_1 \in [-0.87, 0.4]$ and $x_2 \in [1, 5]$

B. $x \in [-0.11, 0.48]$

C. All solutions lead to invalid or complex values in the equation.

D. $x \in [0.78, 1.87]$

E. $x_1 \in [-0.11, 0.48]$ and $x_2 \in [1, 5]$
